

PHILIP MORRIS U. S. A.
INTER-OFFICE CORRESPONDENCE
RICHMOND, VIRGINIA

File
FTC 425

To: . Mr. J. E. Wickham
From: . Becky Wilkinson
Subject: . Comparison of Tar and Nicotine Delivery: FTC Versus TITL Versus Philip Morris

Date: December 21, 1981

Tar and nicotine data generated by TITL and the FTC on Market Survey #25 are compared to Philip Morris data in the C.I. Report, dated April, 1981. Approximately 80% of the 188 brands compared are in the low tar category defined as "15 mg of tar or less." The average tar and nicotine delivery for all brands in this comparative study are given below:

	Tar Delivery, mg/cig.	Nicotine Delivery, mg/cig.
FTC	11.1	0.85
TITL	11.2	0.85
Philip Morris	11.2	0.86

Although there is no significant difference in the overall averages of the tar and nicotine delivery for the three laboratories, the differences in tar delivery determined in increments of 5 mg of tar (see Table I) show a considerable deviation between Philip Morris data and TITL and FTC data. In 50% of the tar categories, TITL tar data average higher than Philip Morris data. FTC tar data average higher than Philip Morris data in all categories except in the 0-5 mg and 6-10 mg tar ranges. The differences are attributed to sampling and the ability of the Philip Morris laboratory to detect brand modifications. Results show little deviation in TITL and FTC tar delivery.

The differences in nicotine delivery given in Table II show little deviation in the data for Philip Morris, TITL, and the FTC. The FTC and TITL nicotine data average slightly higher than Philip Morris in all categories except in the 0-5 mg and the 6-10 mg tar ranges. The correlation in the tar and nicotine delivery for the three laboratories is shown in Graphs I-VI.

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The Philip Morris target tar delivery, the Philip Morris C.I. Report tar delivery, the TITL Market Survey #25 tar delivery, and the FTC Market Survey #25 tar delivery reported for Philip Morris brands are shown in Table III.

Table IV shows the average tar delivery for all brands in Market Survey #25 in relation to prior surveys. Tables V and VI give deletions and additions since Market Survey #24.

BW:rrs

cc: Dr. M. Hausermann
Mr. F. E. Resnik
Mr. W. G. Lloyd
Mr. T. T. Goodale
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Attachments

Betty Wickham

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TABLE I
DIFFERENCES IN TAR DELIVERY
IN INCREMENTS OF 5 MG OF TAR DELIVERY¹

<u>Tar Range</u>	<u>N</u>	<u>Δ TITL²</u>	<u>Δ FTC³</u>
0 - 5 mg	39	-0.51	-0.68
6 - 10 mg	52	-0.35	-0.26
11 - 15 mg	57	+0.47	+0.55
16 - 20 mg	27	+0.28	+0.45
21 - 25 mg	10	+0.33	+0.58
26 - 30 mg	3	-0.47	+0.27
Overall	188	0.00	+0.05
0 - 15 mg	148	-0.07	-0.06
16 - 20 mg	27	+0.28	+0.45
21 - 30 mg	13	+0.15	+0.51

¹The tar ranges are determined by Philip Morris data.

² $\Delta \text{TITL} = [\Sigma(\text{TITL}-\text{P.M.})]/\text{N}$

³ $\Delta \text{FTC} = [\Sigma(\text{FTC}-\text{P.M.})]/\text{N}$

TABLE II
DIFFERENCES IN NICOTINE DELIVERY
IN INCREMENTS OF 5 MG OF TAR DELIVERY¹

<u>Tar Range</u>	<u>N</u>	<u>ΔTITL²</u>	<u>ΔFTC³</u>
0 - 5 mg	39	-0.03	-0.03
6 - 10 mg	52	-0.03	-0.04
11 - 15 mg	57	+0.02	+0.02
16 - 20 mg	27	+0.03	+0.02
21 - 25 mg	10	+0.04	+0.06
26 - 30 mg	3	+0.02	+0.06
Overall	188	+0.01	0.00
0 - 15 mg	148	-0.01	-0.01
16 - 20 mg	27	+0.03	+0.02
21 - 30 mg	13	+0.03	+0.06

¹The tar ranges are determined by Philip Morris data.

² ΔTITL = [Σ(TITL-P.M.)]/N

³ ΔFTC = [Σ(FTC-P.M.)]/N

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TABLE III

PHILIP MORRIS TARGET TAR DELIVERY,
PHILIP MORRIS C.I. REPORT TAR DELIVERY,
TITL MARKET SURVEY #25 TAR DELIVERY, AND FTC MARKET
SURVEY #25 TAR DELIVERY FOR PHILIP MORRIS BRANDS

<u>Brand Name</u>		<u>Tar Delivery (mg/cigt.)</u>			
		<u>Target</u>	<u>P.M.</u>	<u>TITL</u>	<u>FTC</u>
Alpine 85		14.5	13.2	13.8	13.9
B & H 85		16.0	14.0	14.5	14.9
B & H 100		16.0	15.5	16.2	16.4
B & H Menthol 100		16.0	15.3	15.8	15.8
B & H 100 (Box)		16.0	16.1	15.9	16.0
B & H Menthol 100 (Box)		16.0	15.8	15.8	15.6
B & H Lights 100		10.5	10.2	10.2	10.3
B & H Lights Menthol 100		10.5	10.2	9.9	9.9
B & H Multifilter 85		11.5	11.3	11.7	12.0
B & H Multifilter Menthol 85		*	10.7	11.4	11.6
Cambridge 100		4.0	3.5	2.9	2.9
Cambridge 85 (Box)		*	0.0	0.0	0.0
Cambridge 85		1.0	1.1	0.5	0.0
English Ovals 85		*	28.1	26.3	28.2
Galaxy 85		*	14.1	13.9	14.2
Hi-Lite 100 (Box)		*	12.1	12.1	12.3
Marlboro 80		16.0	15.5	16.2	16.0
Marlboro Menthol 80 (Box)		*	14.5	14.0	14.5
Marlboro 85		16.0	16.3	16.3	16.5
Marlboro Lights 85		11.5	10.5	10.7	10.7
Marlboro Lights 85 (Box)		11.5	10.2	10.6	10.3
Marlboro Lights 100		11.5	10.4	9.9	10.2
Marlboro Menthol 85		14.5	13.4	13.8	13.7
Marlboro 100		16.0	15.4	15.8	16.3
Marlboro 100 (Box)		16.0	16.2	16.4	16.1
Merit 85		8.0	7.1	6.3	7.0
Merit Ultra Lights 85		4.0	4.0	3.3	2.9
Merit Menthol 85		8.0	7.3	6.5	6.9
Merit Ultra Lights Menthol 85		4.0	4.1	3.1	3.0
Merit 100		10.5	10.1	9.1	9.6
Merit Menthol 100		10.5	9.3	8.8	9.1
Parliament Lights 80		9.0	9.1	8.6	9.0
Parliament Lights 85		9.0	9.0	8.5	8.9
Parliament Lights 100		11.5	11.6	11.5	11.8
Philip Morris 70		*	20.7	20.8	21.3
P.M. Commander 85		*	25.4	26.1	26.6
P.M. International 100		*	15.9	15.8	16.5
P.M. International Menthol 100		*	15.7	15.7	16.2
Players 70		*	24.3	23.3	24.1
Saratoga 120		15.0	14.4	14.8	14.9
Saratoga Menthol 120		15.0	15.0	14.6	14.8
Va. Slims 100		14.5	14.5	14.8	15.1
Va. Slims Menthol 100		14.5	14.9	14.9	15.1
Va. Slims Lights 100 (Box)		9.0	8.0	7.4	7.5
Va. Slims Lights Menthol 100 (Box)		9.0	8.0	6.9	7.4

*None available.

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TABLE IV
AVERAGE TAR DELIVERIES FOR ALL BRANDS TESTED

<u>Market Survey</u>	<u>TITL, mg/cig.t.</u>	<u>P.M., mg/cig.t.</u>	<u>FTC, mg/cig.t.</u>
17	17.5	17.2	17.5
18	17.6	17.3	17.6
19	17.2	16.9	17.1
20	16.0	16.3	16.0
21	15.2	15.4	15.2
22	14.3	14.4	*
23	13.8	13.4	13.6
24	13.1	13.0	12.6
25	11.2	11.2	11.1

*Data were not published.

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TABLE V

BRANDS INCLUDED IN MARKET SURVEY #24
BUT DELETED FROM MARKET SURVEY #25

Aspen 85
Aspen 100
Brookwood 85
Doral 85
Doral Menthol 85
Fatima 85
Home Run 70
Lark II 85
Piedmont 70
Real 85
Real Menthol 85
Salem 85 (Box)
Tempo 85
Winston 100 (Box)

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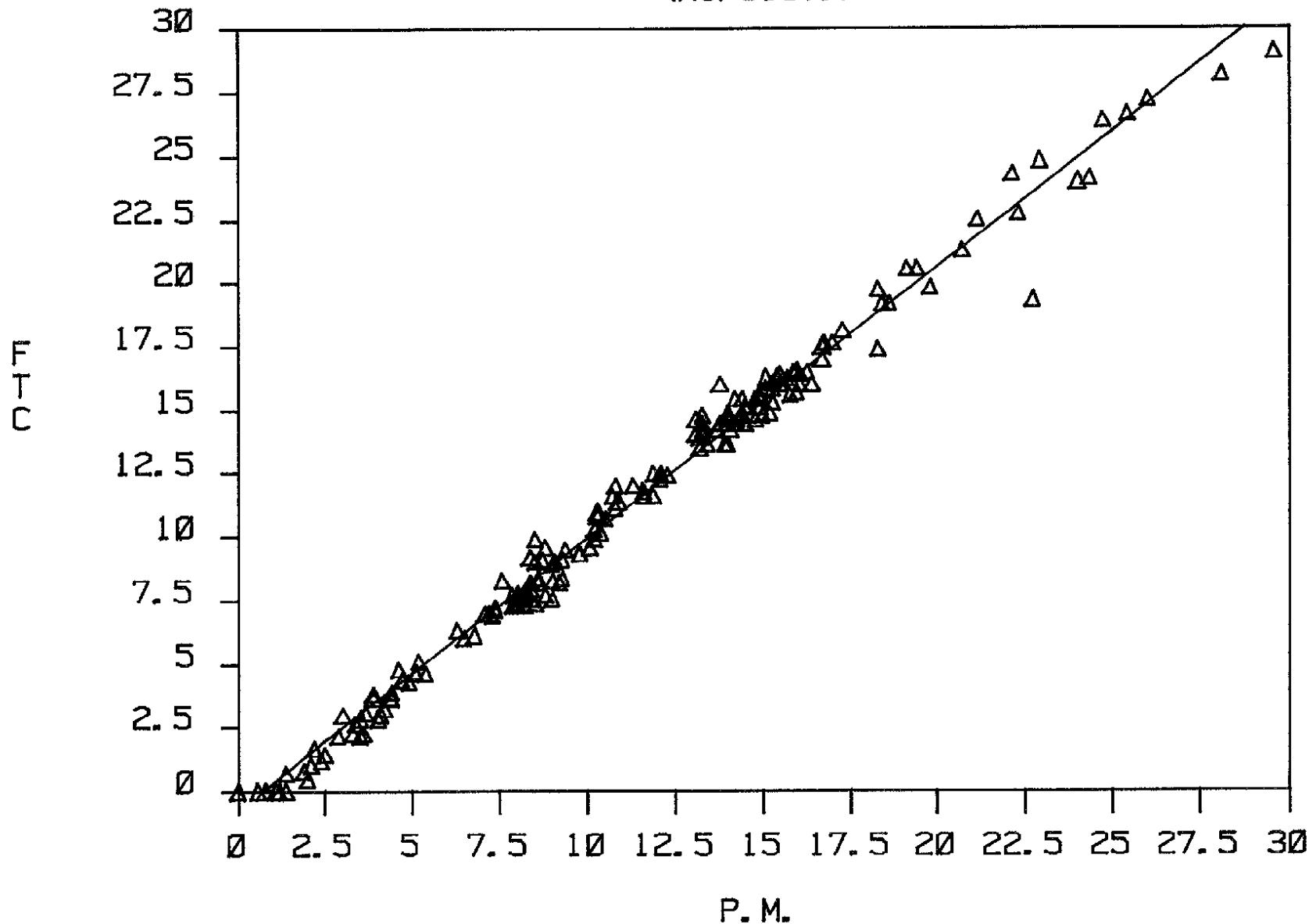
TABLE VI
BRANDS ADDED TO MARKET SURVEY #25

Barclay 85
Barclay 85 (Box)
Barclay 100
Cambridge 85
Cambridge 85 (Box)
Cambridge 100
Carlton 100 (Box)
Carlton 120
Carlton Menthol 120
Hi-Lite 100
Merit Ultra Lights 85
Merit Ultra Lights Menthol 85
Newport Lights 85 (Box)
Now 100
Now Menthol 100
Salem Ultra 85
Salem Ultra 100
Vantage Ultra Lights 100
Winston Ultra 85
Winston Ultra 100

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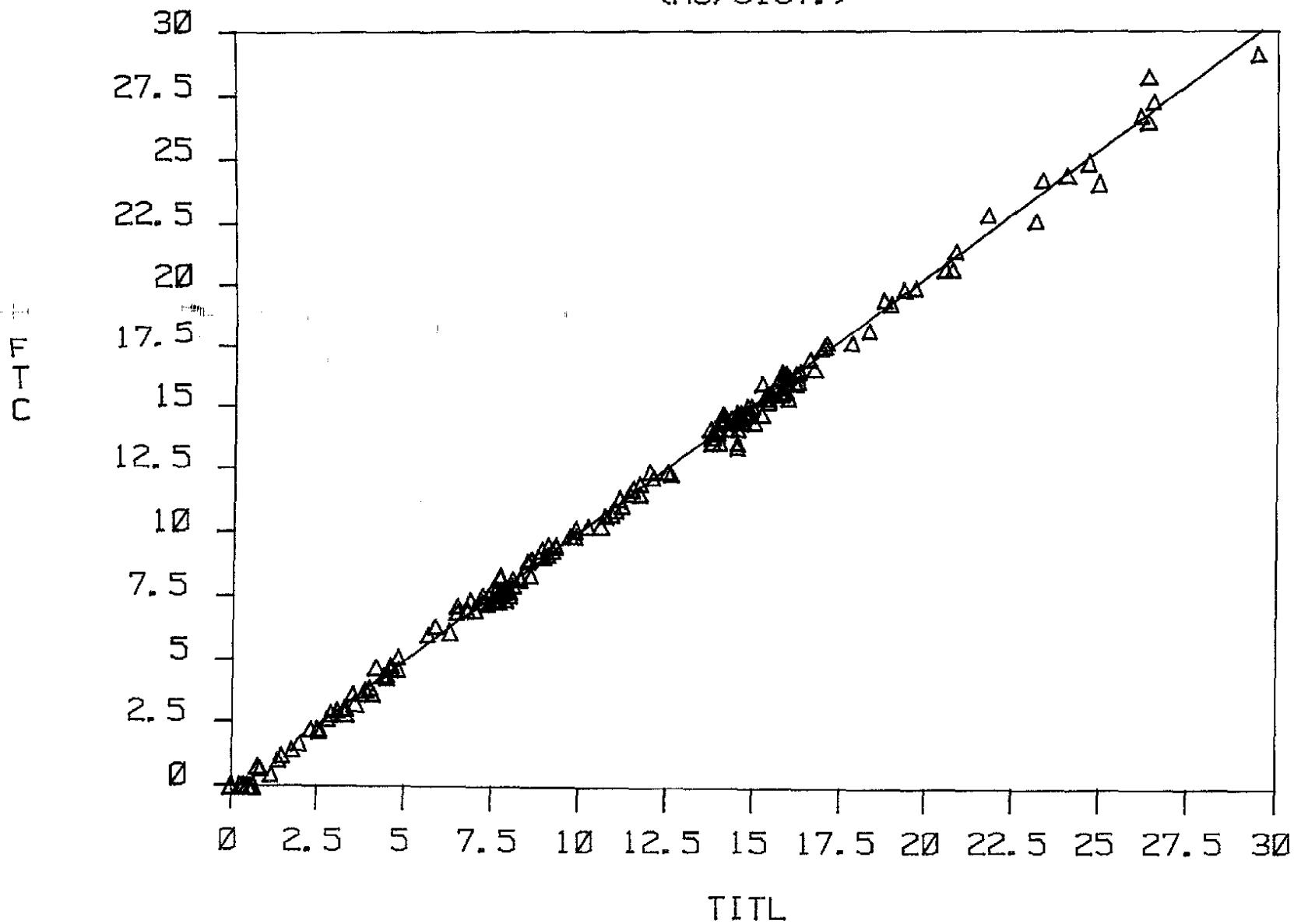
GRAPH 1

FTC TAR DELIVERY: FTC VS. P. M.
(MG/CIGT.)



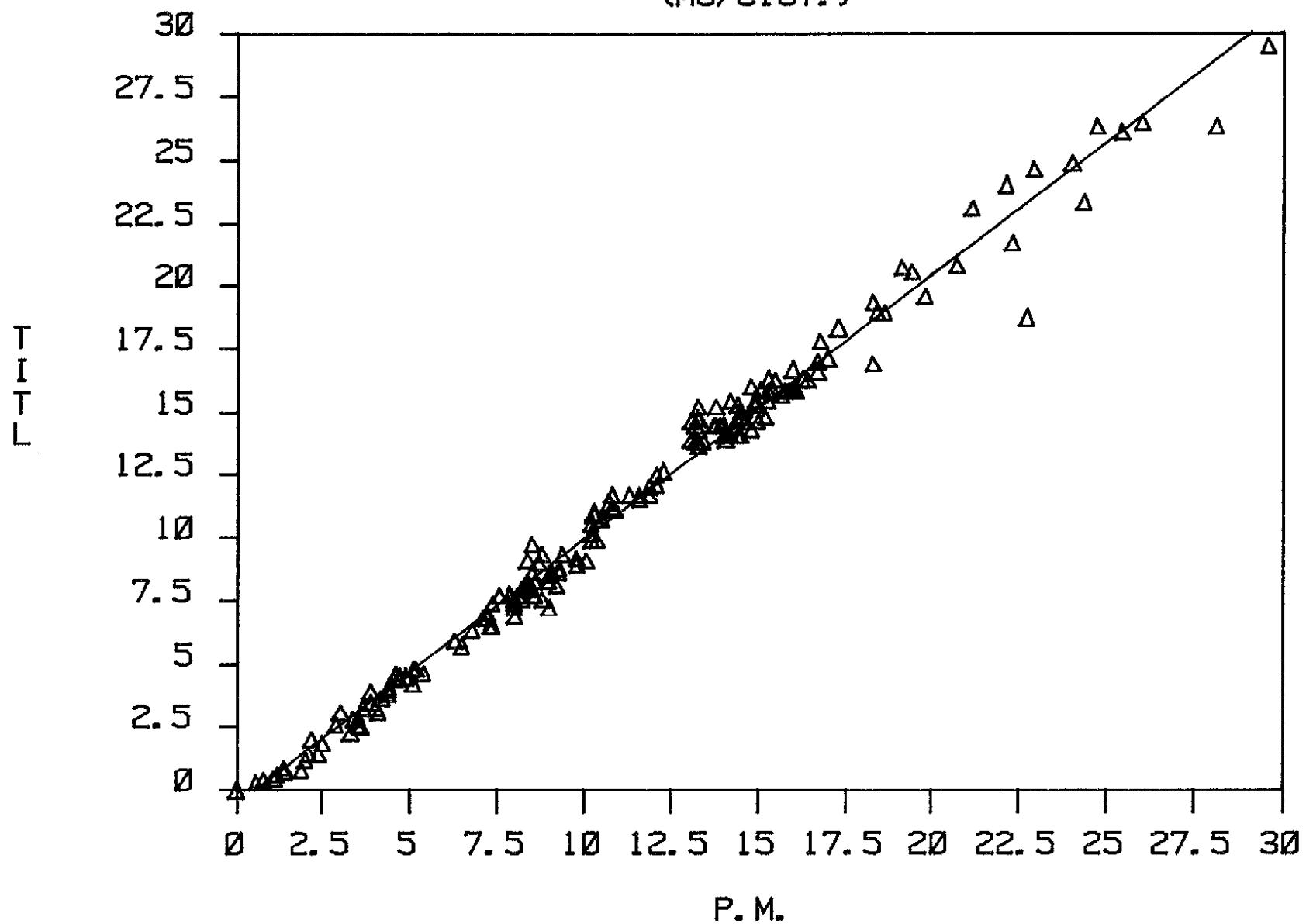
GRAPH 2

FTC TAR DELIVERY: FTC VS. TITL
(MG/CIGT.)



GRAPH 3

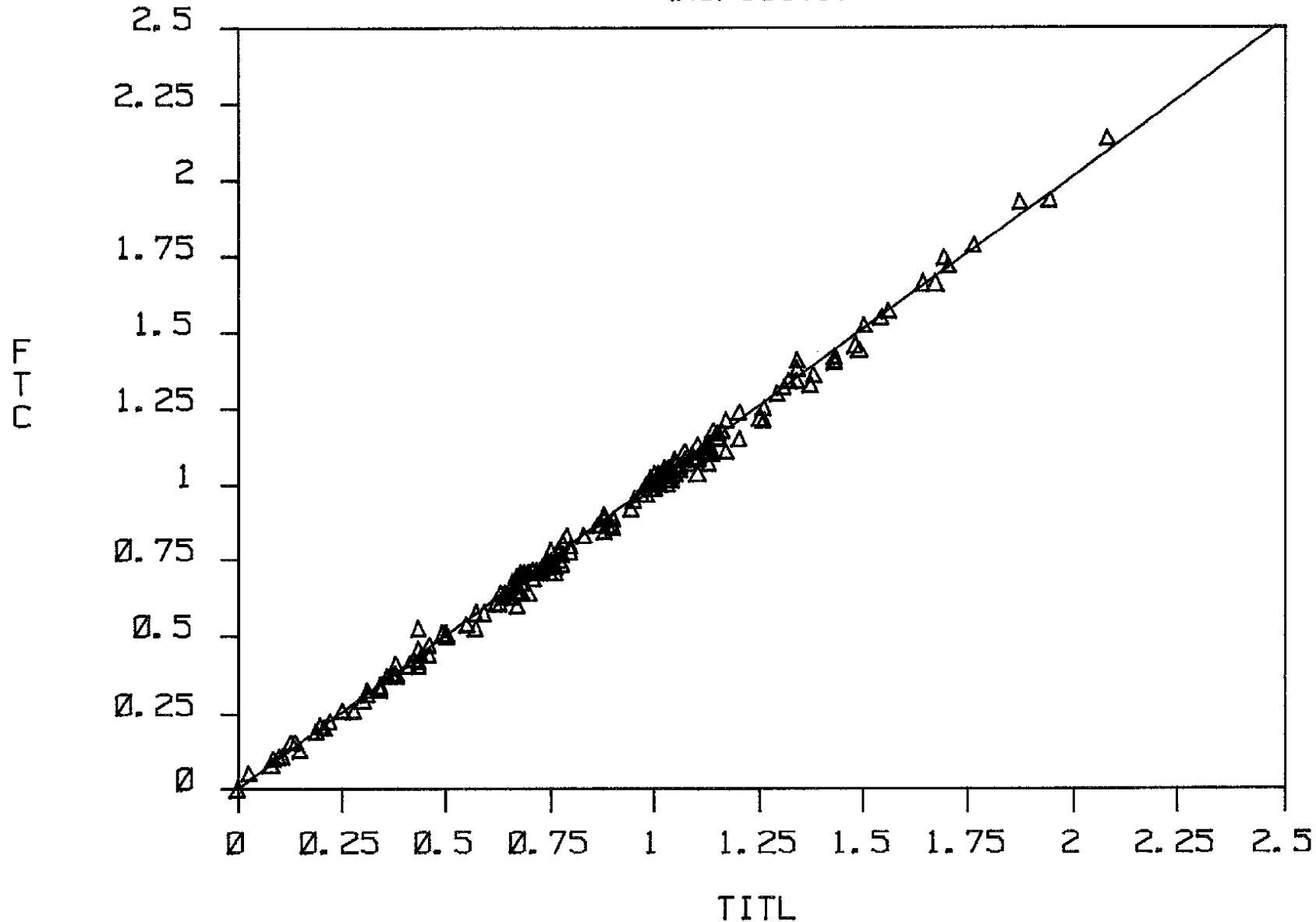
FTC TAR DELIVERY: TITL VS. P. M.
(MG/CIGT.)



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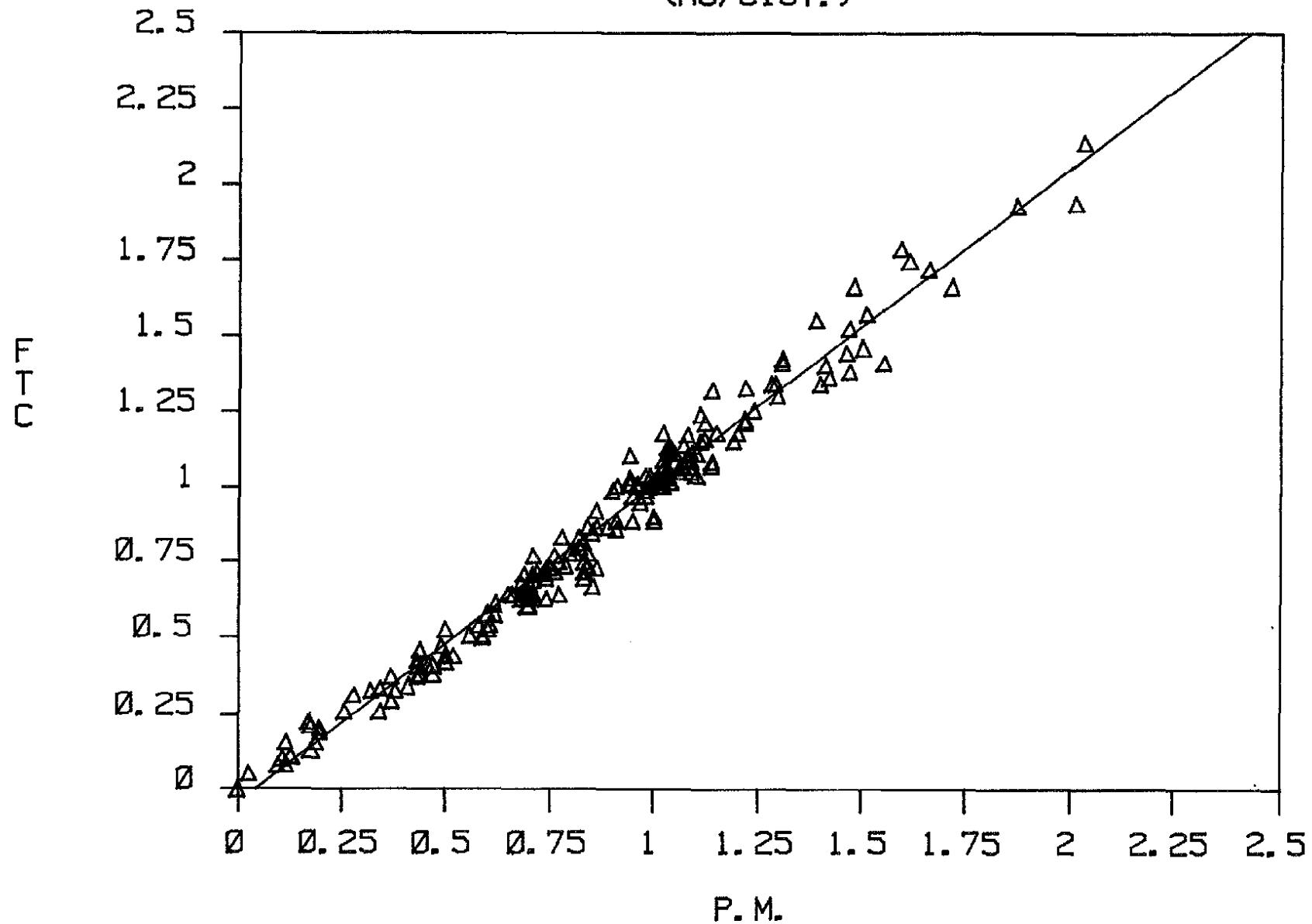
GRAPH 4

NICOTINE DELIVERY: FTC VS. TITL
(MG/CIGT.)



GRAPH 5

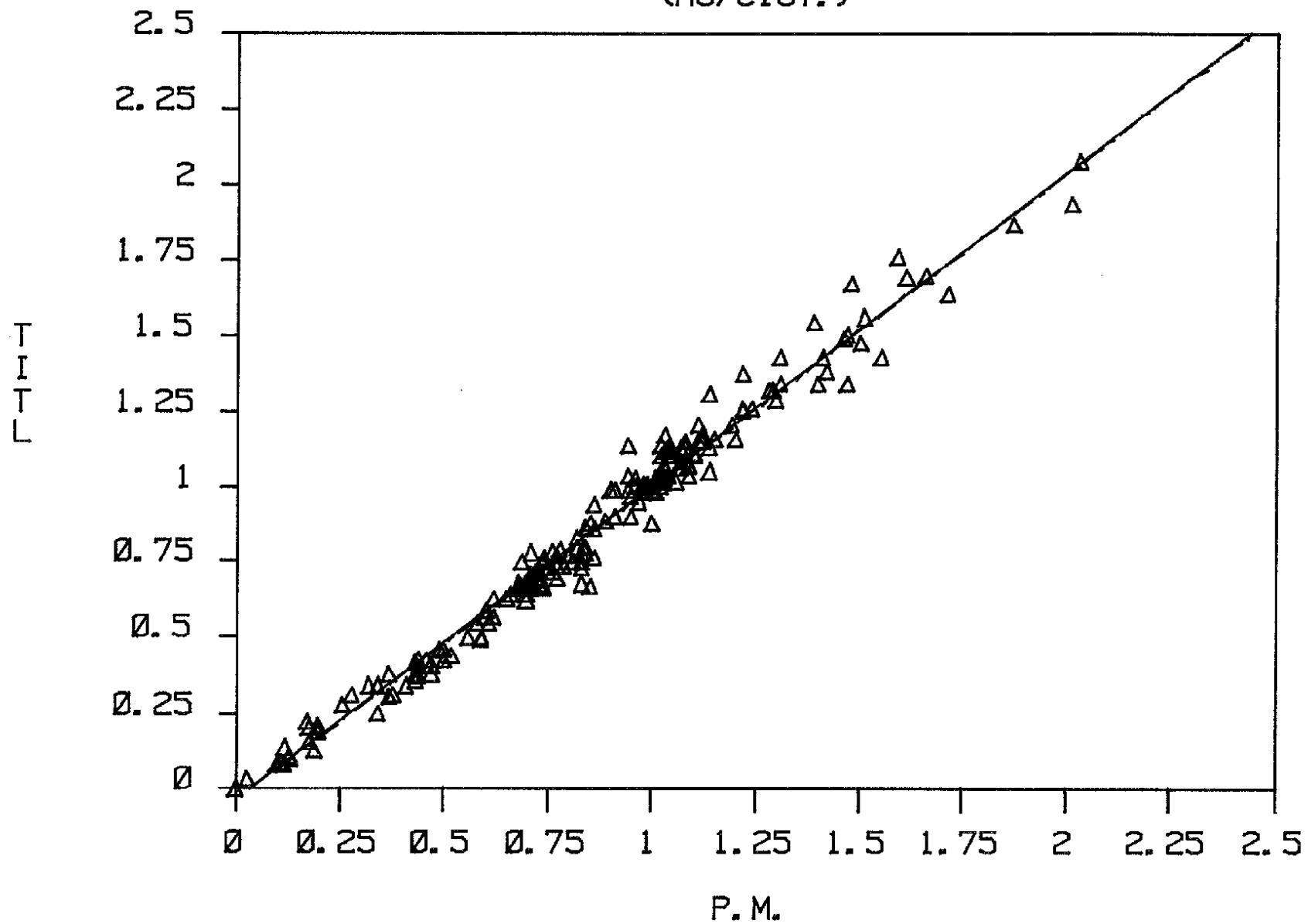
NICOTINE DELIVERY: FTC VS. P. M.
(MG/CIGT.)



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GRAPH 6

NICOTINE DELIVERY: TITL VS. P.M.
(MG/CIGT.)



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